ABSTRACT:

In the case of a method of detecting wind velocities by means of a Doppler-lidar system (10), a laser beam of a defined frequency generated by means of a laser (11) is emitted by a transmitting device (12) toward a space area and the light backscattered from the space area is received by means of a receiving telescope (13). For determining a Doppler shift, an interferogram is generated by means of an interferometer (16), the intensity distribution of the interferogram being directly measured by means of a photodetector (17). The measured intensity distribution is compared with one or more reference patterns which had previously been determined for defined parameters and are filed in a memory device (18a). From the comparison, the Doppler shift is determined as a measurement for the wind velocity. The Doppler-lidar system (10) comprises an analyzing unit (18a, 18b) for implementing the method, having a comparison unit (18b) for the comparison of reference patterns with the measured interferogram.

[Figure 1).